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The Transformation of Teachers: An Adult Learning Approach.

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Abstract

The study focused on the teacher as an adult learner rather than an instructor. A sample of three hundred and three elementary school teachers completed a two-part Likert survey questionnaire. The instrument was developed by the researcher in an attempt to operationalize Mezirow's Theory of Perspective Transformation. The four sub-scales collected information about teachers as they perceived themselves as adult learners and the way they conceptualize Critical Self-Reflection, Meaning perspectives and New Insights (Mezirow, 1978, 1981, 1989, 1990) within a framework of Mezirow's concept of Transformative Learning. Survey research methodology was used. Frequency distributions, means, and standard deviation were calculated. Reliability analysis and Pearson 'r' correlations established the internal consistency of items. Cross tabulations to describe differences in responses across demographic valuables were computed. The survey results indicated that teachers perceived themselves as self-directed learners. The findings support the need for a better understanding of the teacher as an adult learner so that teacher inservice programs and teacher supervision and evaluation can provide a viable learning alternative to the existing models used in practice.

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CHAPTER ONE

AN INTRODUCTION TO THE STUDY

Introduction

This investigation focuses on the teacher as an adult learner rather than as an instructor. It suggests that it is important for teachers to perceive themselves as learners. Experiences, whether externally facilitated or self-directed, when critically reflected, upon transform meaning perspectives (Mezirow, 1981, 1989, 1990). Experiences provide opportunities for teachers not only to learn more about themselves and others, but also to develop a better understanding about the nature of knowledge and learning.

Background Of The Problem

Elbaz (1981) states that

> research on teaching frequently views teachers in a fragmented way in terms of isolated characteristics and from a negative stance. This tends to reinforce the views of the teacher as an instrument ... a cog in an educational machine ... one which seems to fall below the quality controlled stands of the whole. (p.45)

Smyth (1984) suggests that there is a growing realization in educational practice for teachers to change this negative connotation and to be active agents in altering their professional lives. He perceives the clinical supervision process (Goldhammer, 1969) as a viable way of doing this. Smyth (1984) postulates that it is "a means of empowerment by which teachers are able to gain control over their teaching and as a consequence their development as professionals" (p.427).

It has been argued, however, that clinical supervision is just another way of thinly disguising and perpetuating inspection and quality control. Garmen (1986) suggests that if empowerment is the purpose, then reflection with critical intent should be the heart of clinical supervision, "the teacher who maintains a reflective approach toward his or her practice continues to develop a mature personal identity" (p.18).

While there is an abundance of rhetoric in educational literature that exhorts teachers to use a critical and reflective approach to gain control over their personal and professional lives, there is very little theory within the context of this literature to elucidate how this actually happens. Educational literature continues to suggest that the most significant learning experiences in adulthood involves critical reflective learning (Mezirow, 1985; Brookfield, 1984; 1987; Dewey, 1933; Lindeman, 1926; Boyd and Fales; 1983).

Willie and Howey (1981) present a convincing argument to use adult learning principles to be the cornerstone for effective staff development. Knowles (1984), a proponent of adult education, supports this view and impresses upon the need to change the focus in research from the teacher as an instructor to the teacher as a learner. Up to this point, a great deal of emphasis has been placed on the act of teaching and on examining teachers as they plan, execute, and evaluate in their professional roles. Smyth (1984) postulates "one of the important realities to which we need to seriously attend is the way that teachers learn" (p.26).

Despite all the concerns expressed, educational research has not, until recently, taken these very seriously and research on the teacher as an adult learner is still in the exploratory stage.

Purpose of the Study

The purpose of this study is to add to the information on teachers as adult learners by finding out how a group of teachers perceive themselves in terms of being adult learners. This investigation focuses on how teachers conceptualize the process of critical reflection and transformative learning (Mezirow, 1981, 1989, 1990).

This study addresses the following questions:

(1) To what extent do these teachers perceive themselves as adult learners?

(2) To what extent are these teachers able to indicate their involvement in critically reflective learning, even if they were not aware that they were engaged in the process?

(3) How do teachers indicate transformative learning is taking place?

Rationale

This study addressed the school environment and teacher evaluation process as requiring a dimension that is congruent with adult learning principles. The experience of being an adult learner is perceived as a source of new self-sufficiency and empowerment since increased opportunities for change in roles from instructor to learner will help teachers grow as persons and professionals (Willie and Howey, 1981).

Administrators have a pedagogical mindset, that is, they use a child learning approach (Knowles, 1984) which their own experiences as classroom teachers naturally dictate; this is most often reflected in their supervision and evaluation styles and staff inservice programs (Moore, 1988; Dalellew, 1988; Simmon & Schuette, 1988; Mathes, 1988). A climate that is sensitive to teachers' learning needs, not as

administrators perceive it but as teachers recognize it, is vital. Teachers need to take ownership of their learning; they need to venture beyond the security of their formal patterns of thinking and acting and, through a process of critical self-reflection, transform dysfunctional meaning structures (Mezirow, 1989).

Assumptions

The assumptions underlying the researcher are:

(1) that learning is considered to be an activity of making interpretations that may guide decisions;

(2) that reflection is not synonymous with thinking but a distinct process within the framework of thinking;

(3) that it is possible to be involved in critical reflection or transformative learning and not be able to label and recognize the process even though one is engaged in the process;

(4) that critical reflection and transformative learning is a process that requires skills that can be learned, practiced, and will exist at varying degrees within the process;

(5) that the teacher is a developing person and has the capacity to be responsible for setting personal and professional goals; and

(6) that the school, the classroom, and teacher evaluation process have the potential for being viable contexts for critical reflective learning.

Operational Definitions

Administrator / Supervisor	An individual designated by an institution (e.g., School board to monitor, supervise, and evaluate a teacher within an educational setting).
Adulthood	The state of physical, psychological, social maturity which characterizes the period following adolescence.
Adult Learner	An individual involved in and adult role involved in a sustained activity in a formal or informal situation.
Change	A process that suggests a movement of altering ways of thinking and doing and integrating the alternate ways into the scheme of things.

Critical Self-Reflection	A process of adopting a questioning, challenging stance and reflecting on habitual behaviors, common sense ideas, past values, taken-for-granted assumptions.
Meaning Perspective	A frame of reference, predisposition, habits of expectation, structure of assumptions that have been critically or uncritically been accepted and are open to further modifications, restructuring and development.
New Insights	An increased awareness of coming face-to-face of how presuppositions and taken-for-granted assumptions have affected the way we perceive, think, feel, and deal with reality.
Supervision	A process of monitoring and evaluation of teachers and other personnel within a work environment to maintain standards within the organization.

Self-Directed Learning	A process of taking initiatives and primary responsibility for planning, developing, conducting,and evaluating one's own learning projects.
Teacher	An individual involved in the instruction of students. In this study the student connotes a child or adolescent learner.
Teacher Evaluation	A cyclical process instituted by a school board for the purpose of appraising a teacher's performance incorporating a number of stages to meet the specific need of that particular school board.
Transformation	A continuous and ongoing process of modifying, relearning, updating, replacing, enriching knowledge, values, skills, strategies through experience.

Limitations of the Study

The researcher chose to use a sample population of elementary school teachers within a specific geographic area because it was convenient in that the researcher was an

employee of that specific school board. However, this proved to be limiting in that the researcher had to be particularly careful about the personal perceptions and taken-for-granted assumptions that the researcher had so as to maintain objectivity.

Clark and Yinger (1977) claim that mental processes which underlie behavior are important in a study; George Kelly (1963), in his personal construct theory, refers to the individual and unique perceptions of each individual. He directs investigators to examine teachers' thinking rather than making inferences about it on the basis of observation of teachers' overt behavior. Kelly stressed the importance of examining "the successive construing and reconstruing of what happens ... which goes on within an individual" (p.73).

While the researcher found survey research was not able to penetrate deeply into teachers' minds to reconstrue individual perceptions and personal transformative learning, a great deal of data were generated so that it facilitated some generalizations about teachers as learners. It also helped to make teachers feel less threatened by not having to be involved in face-to-face approaches, with a colleague now involved in the role of investigator.

The researcher found that the proliferation of terminology used in adult learning and adult education made it difficult to use terms that were semantically clear in the items of the survey instrument. Titmus (1989) states:

one of the principal difficulties in reconciling theories of, and relating to, adult education has lain in the variety and looseness of definition of terms used to denote it and other linked activities. Problems of communication significant enough because of differences of thought, have been compounded by terminology which has often created misunderstandings, not only between persons' speaking different languages but between people whose language is the same. (p.13)

CHAPTER TWO

REVIEW OF THE LITERATURE

Overview

The review of literature that is to follow can be divided into two broad segments. The first segment will provide an understanding of the concepts of reflectivity and adult learning which form the bases of the theoretical framework of this inquiry. The second segment describes factors that create systemic barriers in the educational environment which militate against teachers being perceived as adult learners.

The first segment, however, points out how Dewey's (1933) theory of critical reflectivity was primarily perceived to be a strictly rational activity. This perception gradually encompassed non-logical, intuitive, affective components and Mezirow (1981, 1989, 1990) includes all these components in his levels of reflectivity; some of these levels are more important in adulthood. This segment also discusses Dewey's (1933) philosophy of education and his concept of life-long learning, as well as Lindeman's (1961) contribution to adult education when he opened the doors for continuing education and education for professional development. It also points out how Mezirow (1981, 1989, 1990) in drawing upon several

philosophers and writers develops a comprehensive theory of adult learning which forms the theoretical foundation of this inquiry.

John Dewey

John Dewey (1933), considered to be the father of progressive thought, is still viewed as the leading figure in the theory and practice of North American education. The progressive view of education aims at primarily liberating the thinking powers of the learner towards personal development and social progress. Life situations form the bases of content, problem solving is the preferred methodology, and teachers and learners are recognized as joint partners in the task of learning (Darkenwald & Merriam, 1982).

Dewey (1933) describes education as a process related not merely to early life but to the whole of life. Human beings are perceived to be born with unlimited potential for growth and development and education facilitates this growth. While Dewey emphasizes the significance of freedom, he also perceived experience to be the heart of human living, leading to growth and maturity. Education comes from experience that is facilitated, not directed, by the teacher. It is from experience that knowledge and understanding are acquired. Experience is not just what happens to a person, but is also what a person does. It is both passive and active in that it not only occurs within the individual, but also through the

interaction of the individual with the environment. Dewey defines education as the reorganization and reconstruction of experience, and suggests that it increases one's ability to direct subsequent experience.

The highest ideal of progressive education is education for democracy and the liberation of the learner, thus leading to an improvement of culture and society. For Dewey, a democratic society is a society committed to change reflected in the fact that it is constantly in a state of growth and development. The role of education is social reform and reconstruction. Education would ideally flourish in a democracy and, in turn, develop it. One of the major tenets of progressive education is the prominence given to the scientific method. This approach provides a way of thinking about events for both theorists and practitioners alike. It is a process involving identifying a problem, conceptualizing it, proposing generalizations in the form of hypothesis, which in turn provide answers to the problems, deducing consequences and implications of the hypothesis and testing the hypothesis. The scientific approach is now considered to be the very embodiment of rational inquiry, whether the focus is theoretical analysis and development, a research investigation, organizational decision making, or problem solving at the personal level.

Dewey and other progressive educators espouse knowledge to be inseparable from experience; knowledge is, in fact,

equated with experience which, when reflected on, forms the basis for further learning (Dewey, 1933).

Reflective Thinking

John Dewey's most influential idea was his concept of thinking as a method of problem solving. One of his books How We Think, (1933) was designed primarily to assist teachers in understanding what thinking is, how to develop habits of reflective thought, the relationship of reflective thinking in the education process, and its implications on child-centered education. Dewey espoused a theory of reflective thinking. Reflection was considered to be more than merely bringing something to mind,

> it is a kind of thinking that involves turning a subject over in the mind and giving it serious persistent and careful consideration ... of any belief or supposed knowledge in the light of the grounds that support it. (p. 9)

According to Dewey, reflection is the key element of thinking and any of the three kinds of thought that he delineates must include a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality in order to be called reflection. Reflective thinking must concern itself not only with the material upon which considerations rest, but the premises as well. He postulates

that there are five phases of reflective thought that do not necessarily follow each other. These phases may be taken in a single phase, or may be telescopic, or passed rapidly. Reflection involves a state of doubt, hesitation, and perplexing mental difficulty in which thinking originates. It is an act of searching, hunting, and acquiring in order to find material that will resolve the doubt, settle, and dispose of perplexity. The demand for solution of a perplexity is the steady and guiding factor in the entire process of reflection. Attitudes of open-mindedness, responsibility, and wholeheartedness are prerequisites to reflective action.

Dewey laid the groundwork for the study of reflection. He perceived it to be a vital process for further knowledge, it is a kind of habit that had to be learnt and is possible when one was willing to endure the suspense and undergo the trouble of searching (p.10). Other fields have continued to elucidate Dewey's concept of reflective activity (1933) which was understood and perceived to be limited to the rational domain. However, reflection is now perceived to have intuitive and affective components (Boyd & Fales, 1983). It was considered to be purposive activity pursued with intent and directed towards a goal (Boud, Keough & Walker, 1985). It is considered to be an important human activity, a form of response of the learner to experience, in which the person recaptures his/her experience, thinks about it, mulls it over and evaluates it, "reflection in the context of learning is a

generic term for those intellectual and affective activities in which individuals engage to explore their experience in order to lead to new understandings and appreciation" (p.3).

Reflection, however, is rarely perceived to be a formal way of acquiring knowledge. It is often perceived to be a meandering kind of activity, an exercise in daydreaming. Reflection is a rarely practiced aspect of the educational process because it is not perceived as a goal-oriented activity and is often perceived to take the place of planning (Garmen, 1986).

Critical Reflection

Reflection that seeks to foster a questioning stance of past values, common sense ideas, and habitual behaviors is defined as critical reflection. It is a process that arises out of perplexity, doubt, disorienting dilemmas, anomalies, and discrepancies between how the world is supposed to work and one's own experience of reality. It requires a suspension of one's beliefs, jettisoning of assumptions previously accepted or taken for granted. It involves an element of skepticism, of saying that because a structure existed for a long time it does not mean it continues to be appropriate. It means identifying challenging assumptions and trying to imagine alternative exciting ways of thinking and living (Brookfield, 1987). Habermas cited in Mezirow (1981) called reflective activity with critical intent the heart of the

process which frees the human mind. He defined a reflective person as one with a disposition to investigate and reconstruct an aspect of the social and moral environment to achieve enlightenment and ultimate emancipation.

Critical reflection is perceived to be the key element among others in reflective thinking (Dewey, 1933), emancipatory learning (Apps, 1985), reflective learning (Boyd and Fales, 1983), reflection-in-action (Schon, 1983), perspective transformation (Mezirow, 1981, 1985, 1990).

Theories of critical reflection that have been developed take on special roles in that they present guidelines for human action towards enlightenment and emancipation for the people who hold them. They provide insights into society and autonomy of individuals and organization. This is done primarily through first and foremost increasing social knowledge and promoting the acquisition of practical skills and the development of critical discourse (Adler and Goodman, 1986).

Jack Mezirow

In his theory of perspective transformation, Mezirow (1981, 1990) assumes that everyone has constructs of reality, which develop from various sources of their psycho-cultural world. These have constrained the way they see themselves and their relationships. This in turn limits rational control of individuals' lives. By bringing these assumptions into

critical consciousness, a person is helped to understand how one has come into possession of the conceptual categories, rules, tactics, criteria for judging, implicit habits, and perceptions of thought and behavior.

Learning is said to occur when existing knowledge is viewed in a new perspective of what Mezirow calls perspective transformation. A perspective is transformed by resolution of a dilemma through exposure to alternate perspectives and participation in critical discourse with others to verify one's view of reality (Mezirow, 1990). It occurs as a functioning of reflection and may be a sudden or gradual developmental process of movement in a non-formal learning situation. It is concerned with not the how, but the why we do what we do and the consequences of what we do. It is the process that looks back and determines whether what we have learned is justified under the prevailing circumstances (Mezirow, 1990). Critical self-reflection is crucial to perspective transformation because it challenges and questions the validity of long taken-for-granted perspectives of meaning, as well of orientations of knowing, perceiving, believing, feeling, and acting (Mezirow, 1981, 1989, 1990).

Building upon Habermas' concept of critical intent, Mezirow (1981) unveils some of the major dimensions of his theory of critical reflectivity. He delineates seven different levels of reflectivity and claims that some are more likely to occur in adulthood. The first level is that of

becoming aware of specific, perceptual, behavioral or habitual ways of seeing, thinking or acting. Affective reflectivity, the second level, is being aware of one's feelings around perception, thinking, and acting. Discriminant reflectivity, the third level, assesses the efficacy of our perceptions, thoughts, and habitual way of doing things. Judgemental reflectivity, the fourth level, makes us aware of our value judgements about our perceptions, thoughts, actions, and beliefs in terms of being positive and negative.

The fifth level, conceptual reflectivity (which pertains to perspective transformation) is becoming aware of our awareness and critiquing it. Psychic reflectivity (the next level) is being aware of our habitual ways of making precipitant judgements about people on the basis of limited information. It also recognizes the way the interests and anticipations influence the way we perceive, think, or act. Theoretical reflectivity (the seventh level) searches for an understanding of the reasons for acting and feeling and tries to understand the structure of reflection.

Adult Education

Adult education draws upon different religious, political, and social movements of which it has been an instrument. It has evolved a body of principles and issues of philosophical debate that are peculiar to itself. The term adult education has become a "semantic quagmire" with the

field plagued with a plethora of definitions, conceptual ambiguities, and confusion of terminology. For instance, the term, self-directed, can be expressed in different ways, such as "autonomous", "independent". Definitions also vary on the basis of philosophical orientations of a school of thought. For example, the behavioral school of thought defines adult education in terms of changes in behavior influenced by the educative process; while the school of radical thought emphasizes the aspect of raising people's consciousness to social and political contradiction that exist in a society; and the humanist school of thought focuses on the growth and development of the individual (Titmus, 1989).

While the differences of aim, content, and instructional processes prevail, it would be appropriate to say that there are some underlying similarities in the principle schools of thought on adult education in terms of perceiving children and adults as being different from each other and on the emphasis put on learning rather than on the teaching. Furthermore, focus is placed on the individual being the prime learner, the group as the prime vehicle and the importance of the aspects of interplay between the emotional and intellectual elements of learning (Darkenwald & Merriam, 1982).

Edward Lindeman

Edward Lindeman (1926), influenced greatly by Dewey, parallels him in many ways. He believed education to be not

quite complete at the so called compulsory stage and extended it at point that "the whole of life is learning, therefore education can have no ending" (p. 4).

Lindeman, like Dewey, believed in the primacy of personal experience. Experience is "doing something, then doing something that made a difference and finally knowing what made the difference" (p. 3).

According to him, it was vital to continually analyze experience and discourse was the process used to facilitate this. Knowledge is experience both reflected and acted upon. Lindeman offered one of the earliest outlines of adult education (1926) when he espoused adult education to be the antithesis of the additive process of education in school. Adult education represented new techniques for learning for adults. It not only created an awareness of, but also motivated adults to evaluate their experiences and change their habits of learning to live.

Lindeman (1926), in his Critical Theory of Adult Education, believed that education should aim at improvement in an individual's life in society, not merely to cope with social change but to also contribute to social action. He perceived the role of adult education to be one that synchronized the learning process with the preservation of democracy. The primary task of the adult educator was to ensure that adults were assisted in making informed choices about social and political issues and that they learned how to

use their collective powers wisely. Lindeman emphasized shared learning, shared authority, collective and collaborative determination of curriculum with discourse to be the accepted method (Brookfield, 1987). These approaches presently form the basic tenets of the methodology used in adult education.

Lindeman also elucidated the importance of the non-vocational character of adult education because he believed adult education started where vocational education left off. This was particularly significant to the concept of continuing education and opened new avenues in the areas of professional and staff development.

Jack Mezirow

Like Lindeman, Jack Mezirow (1981) espouses that adult education is not additive. Adulthood is the time when we reassess the assumptions we made and uncritically accepted in our formative years. These have been influenced and distorted by our view of reality through social processing in childhood. Mezirow (1985, 1990) views adult learning as a process that has three distinctive yet uninterrupted functions, namely:

1. Instrumental learning which is task-oriented problem solving relevant for controlling one's environment or other individual,

2. Dialogue learning which is an attempt to understand what others mean in communicating with us, and
3. Self-reflective learning by which we come to understand ourselves.

There are learning processes operative in each of these learning functions. They are (a) learning within new meaning schemes, that is, learning within a structure of acquired frames of reference which Mezirow calls "recipe learning"; (b) learning new meaning schemes within existing meaning perspectives; and (c) learning through meaning transformation, that is, becoming aware of specific assumptions upon which a distortion or incomplete meaning scheme is based, through a process of reorganizing of meaning and transforming it.

Mezirow (1990) describes meaning perspectives as a structure of cultural and psychological assumptions within which new experiences are assimilated and transformed by one's past experience,

> people encounter an experience which appears meaningless, an anomaly that cannot be given coherence within a prevailing meaning perspective. Illumination comes through a redefinition of the problem. Reframing the problem is achieved by critically assessing assumptions that support the meaning scheme or perspective within which the experience is being interpreted. (p. 197)

Mezirow points out that the affective and conative dimensions are especially important within the transformation process. This process becomes a threatening process when old ways of seeing oneself and one's values become negated or reinterpreted into a new synthesis, while social norms and relationships reinforce the old frame of reference.

Mezirow views adult education as a process which assists those fulfilling adult roles to understand the meaning of their experiences. By participating more fully in rational discourse, expressed ideas are validated. However, Mezirow maintains that perspective transformation does not take place solely through rational discourse and emancipation insight but through acting on these insights. Transforming meaning perspective itself does not prescribe the action to be taken, but a set of rules, tactics and criteria for judging; even if the decision is not to take any action, it is perceived to be an action in itself (Mezirow, 1990). Learners may be at different levels of transformation learning and some may not fully recognize that they are engaged in such a process. Although Mezirow's approach is significant in understanding the process of adult learning, it has been argued that not all adults may develop or necessarily learn from their experience and this perhaps requires additional evidence.

Adult Learning

Although there is a substantial body of knowledge accumulated and generalized about how adults learn and grow, the information is still fragmentary and adult learning is by no means a fully articulated concept. First and foremost there is little agreement on what constitutes an adult. Some definitions use age as criteria, but it has been argued that many older persons do not always exhibit behaviors and responsibilities of persons in adult roles. Others define adulthood in terms of psychological maturity (i.e., emotional, intellectual, and social) linked to social and emotional status; however, personal maturity is not an absolute state but viewed as a life-long process conditioned by personal and social needs (Titmus, 1989).

The principle schools of thought do not clearly distinguish between adult and child learning; however, they have concepts that are inter-related and provide us with explanations of how people learn and why some basic approaches should be taken.

Education has traditionally concerned itself with the development, process of socialization, and transmission of knowledge of children and youth. Child learning can be described as formative (acquiring, discovery, integrating) in terms of knowledge, skills, strategies, and values from experience. Adult education, on the other hand, touches groups

of individuals who go beyond compulsory education or have interrupted their initial education in order to assume major or social roles in society (Titmus, 1989). Adult learning can be described as transformative (change, enrich, update, replace, relearn) of knowledge, skills, strategies, values through experience (Knowles, 1984; Mezirow, 1981; 1990; Brundage & Mackeracher, 1980).

It has been argued by some writers, (Knowles, 1980) that adult learning is qualitatively and quantitatively different and should be approached differently from the learning of children. The science and art of adult learning called andragogy, popularized by Malcolm Knowles (1984), provides some basic assumptions: (1) Adult learners as they mature in self-concept move from dependency to self-direction; (2) each adult brings a rich reservoir of experiences organized in their own individual way which forms the basic resource for new learning; (3) adult learning is not subject centered but problem centered and oriented to life situations with the need for immediate application to problem solutions (Brookfield, 1984; Darkenwald, & Merriam, 1982); (4) individual differences follow a pattern of transitional phases which impact and influence an adult's entire structure perspective and readiness to learn (Knowles, 1984; Levison, 1978); and, (5) adults will be motivated as they experience needs and interests which only learning will satisfy.

Self-directedness is perceived to be the goal in andragogy; it is assumed to be an essential element for self-realization and is said to allow adults to learn better, retain more, and make better use of learning as re-active learners. Self-directing abilities are said to allow adults to gain greater control of their destinies (Knowles, 1984).

There seems, however, to be a lack of conceptual clarity in terms of defining self-directed learning, and a proliferation of terms used interchangeably and synonymously to describe the process. What seems to exist is an underlying ideology which implies that many initiatives of independence and autonomy are passed on to the learner with the assumption that involvement in an autonomous activity will automatically make an individual internalize the process and transfer it to thinking and acting. However, it has been argued that this is not necessarily the case and the use of autonomous methods of learning and development of autonomy is not automatic (Titmus, 1989).

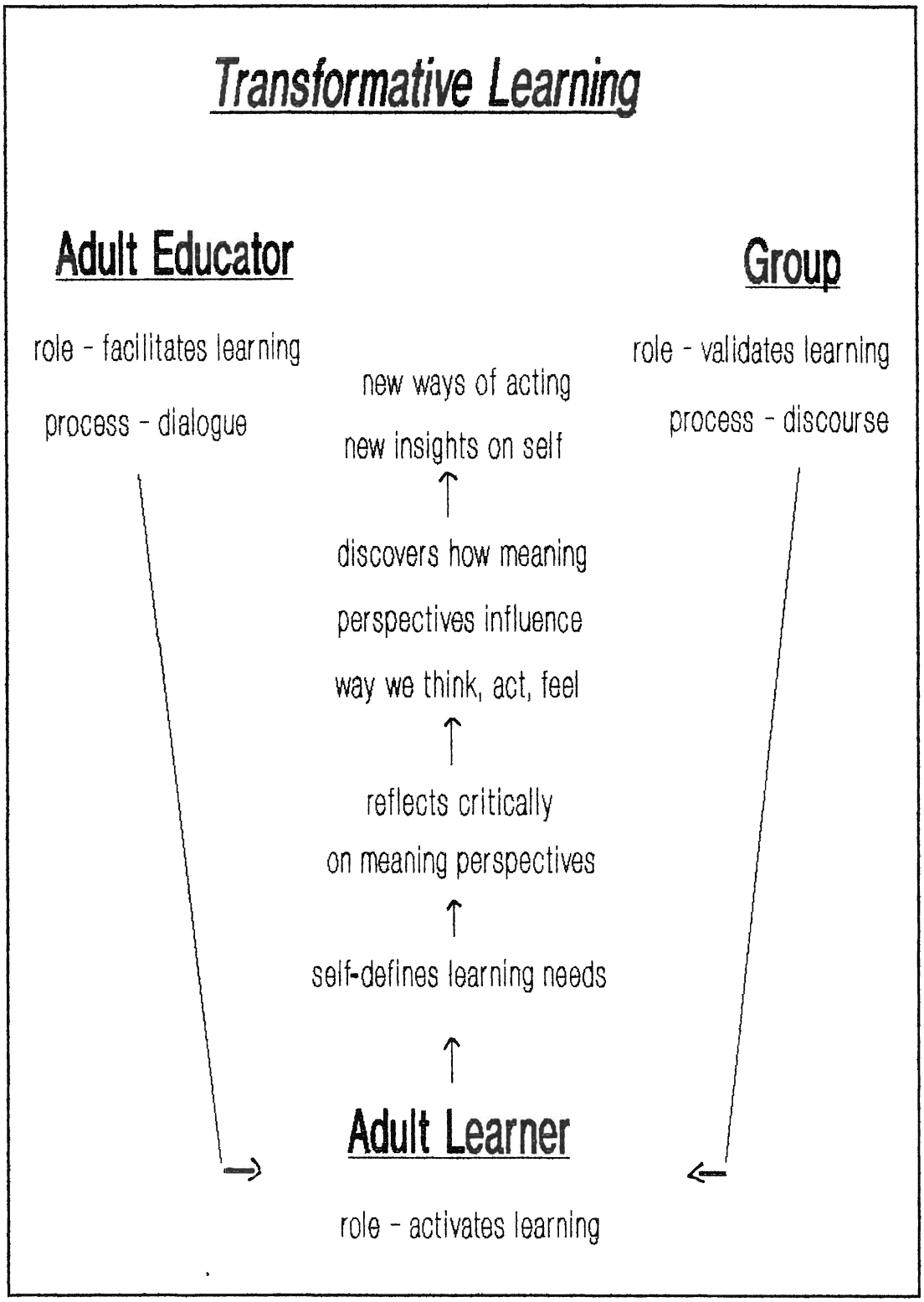
In fact, there is a great deal of literature that suggests that all adults are not independent, many vary in the degree of self-directedness, and some are far from being self-directing. Some may not perceive themselves as self-directed even though they use this behavior. Others may exhibit temporary dependent behaviors in traumatic and crisis situations and yet others may never attain the stages

postulated because they have few opportunities to develop and use such behaviors (Brundage & Mackeraker, 1980). However, adults are said to move along a continuum from dependency to self-directedness. A great deal of literature suggests that although some adults know how to make decisions about their learning, they have difficulty directing it in new learning situations and need support systems to do so (Brookfield, 1984; Cranton, 1989). An adult learner's non-readiness to engage in self-directed learning is often perceived as a deficiency and this may be inaccurate in that it might be indicative of a preference of a different mode of learning when a strategic suspension of independence in order to seek support or direction is recognized in some instances to be more a advantageous way to learn (Herberson, 1990; Brundage & Mackeraker, 1980; Titmus, 1989).

Mezirow (1990) builds upon the idea of the self-directed learner when he states that the adult learner "diagnoses his own learning needs, formulates his own learning goals . . . through instrumental dialogue and self-reflective learning" (p.15). Self-reflective learning and the three processes - (1) learning within meaning schemes; (2) learning new meaning schemes; and (3) learning through meaning transformations (Mezirow, 1989, 1990) - are helpful aids in interpreting the results of this study.

Mezirow postulates that the adult educator and the group have roles in the transformative learning process. The schematics on the transformative learning model (See Figure 1) will be very helpful in understanding the process. The adult educator fosters transformative learning by taking the role of a facilitator who provides the environment and forum for critical reflection. The adult educator responds to the initial interest and self-defined needs of the learner with the intent of moving the learner to a level of awareness of the reasons of the needs and how the learner's meaning perspectives have influenced the way that one perceives, thinks and acts. The process of dialogue becomes salient. Since each learner is at a different stage of development there is likely to be great variations in meaning perspectives among the learners. Recognition of these individual differences is important and crucial and the adult educator needs to keep in mind that one has to begin where each learner is. The group validates the learner through the process of discourse. It also provides support that is uncritical in nature, and helps the learner to understand that others share similar experiences and dilemmas. It offers an environment in which the learner feels safe for expression of feelings and critical self-examination. Cooperative and collaborative learning are important to the group.

Figure 1 The Transformative Learning Process.



Systemic Barriers

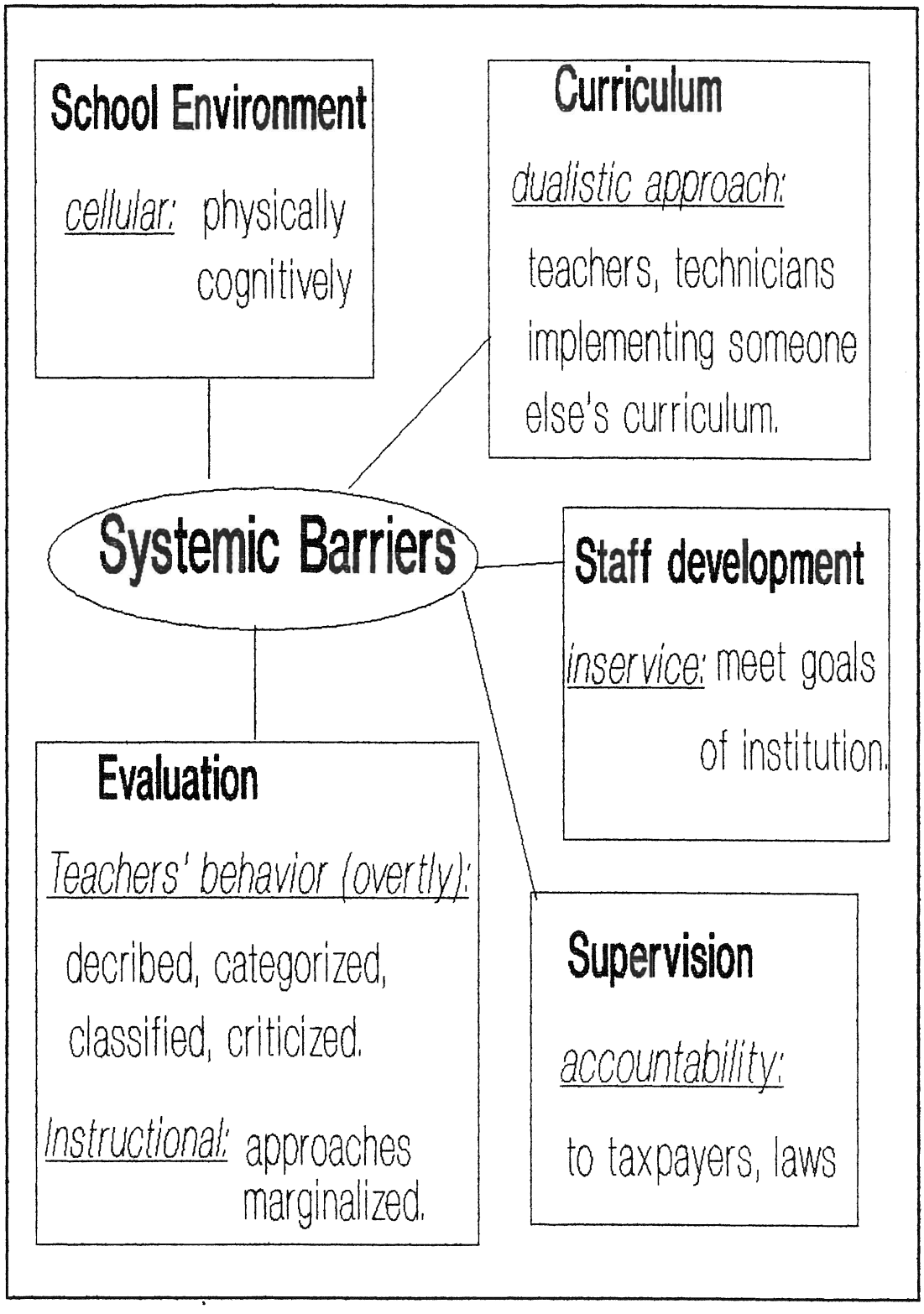
A schematica (See Figure 2) has been developed to enhance the understanding of the literature reviewed in this segment. It elucidates how some of the practices of teacher supervision and evaluation, approaches of technocratic rationality; and the pedagogical mind set of administrators in inservice and staff development form systemic barriers towards perceiving teachers as adult learners.

Teacher Evaluation

Although teaching is an adult role, the continuing reluctance of society to move teachers into the realm of fully recognized professional status have had oppressive effects on the self-directive facets of their profession. Teachers are viewed as technicians in need of supervisors to continually oversee their work with a negative process of criticism to maintain effective performance. Teachers are treated in a deficit stance in terms of not being perceived to handle discipline problems pertaining to their students, as well as not having sufficient mastery over the subject matter they teach (Gitlin & Smyth, 1989).

Solutions for improvement are sought in systems of monitoring, detecting, and "evaluating" teaching performance, and attempting to reduce and eliminate behaviors perceived to be offensive. While the term "evaluation" taken from the Latin root meahs "to strengthen, to empower", the meaning of

Figure 2 Systemic Barriers



the process of evaluation has become distorted and has taken a different complexion. Rather than strengthening and empowering teachers, evaluation is seen as an end rather than as a means, where the act of measurement is of prime importance. What seems to be happening is that teachers are further away from being agents of their own personal and professional development (Garmen, 1986; Smyth, 1986). Most evaluation practices espouse the need for teachers to be active agents in their personal and professional development (Hickcox, Lawton, Leithwood & Musella, 1988). Yet the logic of accountability continues to be the prime motive for the development and practice of teacher supervision.

Teacher Supervision

Historically, supervision was seen as a necessary way of restricting entry into the teaching force but, as time went by, it came to be a form of endorsement for particular views of teaching (Smyth, 1986). The body of literature on teacher supervision indicates that the models used in educational practice vary with the purpose and goal of evaluation (Tanner & Tanner, 1987; Hickcox et al., 1988). When the process of teacher supervision implies monitoring and evaluative judging, the goal of supervision is determined by the degree and control of the monitoring and judging involved.

Modes of supervision, of which directed supervision is one, imply a high degree of control by the supervisor over

monitoring the instructional and growth plan of the teacher. Non-directive supervision allows the teacher a greater degree of control. Collaborative supervision implies that decisions about the instructional and growth plan of the teacher are made collaborative by supervisor and teacher (Glickman, 1985). Differentiated supervision implies different types of supervision provided to match the needs and styles of teacher (Glatthorn, 1987).

Historically, the inspectional mode implied a directed mode of supervision; it has negative connotations and implies a one-time visitation with judgements that are preconceived on issues of teacher effectiveness, and administrative decisions of promotion, retention, or dismissal from service (Goldhammer, 1969; Tanner & Tanner, 1987). Clinical supervision, a process that is popularly used now, was developed as an alternative to the inspectional mode. It emphasizes collaborative planning, collegial working relationships, and the promotion of the professional role and responsibility of the teacher within a personalized consultative framework (Goldhammer, 1969).

Clinical Supervision

Clinical supervision is described as a cyclical process of goal setting, observations of teaching behavior, analyses of observations, and feedback of the analyses of observation, setting new goals and planning for future observations. This

process claims to be flexible in that it can be used with a teacher or group of teachers and espouses to work systematically in the classroom through face-to-face working relationships between teacher and supervisor (Goldhammer, 1969). This process has become popular because three features characterize the process: "continuity" in terms of extended time frames; "evidence" which refers to data-based analysis of behaviors; and "autonomy" or the ability to control one's behavior (Russell & Spafford, 1986). It assumes a non-threatening state of mind; however, it does not take into consideration the power and authority associated with supervisors. Its intent is to enhance the symmetrical relationships between teaching colleagues so that there is the likelihood that autonomous teacher action emerges as a consequence of informed conferral and dialogue. However, the framework for such dialogue is ambiguous and constrained. It also espouses collaboration between teacher and supervisor, but such collaboration between persons of unequal status in the hierarchy has to be viewed with skepticism (Smyth, 1986).

Most often, clinical supervision is perceived to be a way of fine-tuning teaching and relies heavily on observational instruments for describing, classifying, and categorizing. These are based on the assumption that the significant elements in the classroom can be identified, described, and analyzed, and improvement in any of the areas observed can be related to improvement in the teaching-learning process

(Smyth, 1986; Hickcox et al., 1988). However, the act of teaching is not easily divisible and the overt behaviors do not necessarily provide one with clues as to how one is thinking. Furthermore, by focusing on the analyses of instruction it creates a dualistic assumption that relegates curriculum and instruction to two separate realms of activity in which teachers are technicians implementing somebody else's curriculum (Tanner & Tanner, 1987).

Gitlin and Smyth (1988) point out that one of the main issues of clinical supervision is

> whether it should be constructed in instrumental terms as a way of fine tuning teaching or whether it is a way for teachers to transcend and transform their teaching and the social and cultural circumstances in which they do it. (p. 139)

They also state that

> as long as we have excessive concerns with the instrumental and technical aspects of teaching, then these get in the way of asking questions about how schooling perpetuates injustices, inequalities in our society and actually prevents the more consequential questions from being asked. (p. 145)

Gitlin and Smyth maintain that it is important for "teachers seeing themselves as potential active agents who have stake in

altering their oppressive circumstances rather than technicians implementing someone else's curriculum pedagogy and evaluation" (p. 147).

Gitlin and Smyth (1988) argue that although clinical supervision celebrates a view of change and espouses concern for teacher autonomy, dignity, and work (Goldhammer, 1969), it is limited in that it does not address the critical dimension. Furthermore, Garmen (1986) points out that if empowerment is the major emphasis, then reflection with critical intent should be the heart of clinical supervision.

> The teacher who maintains a reflective approach towards his or her practice continues to develop mature identity. By understanding and articulating the rationale one holds for action and then acting in a reasonable consistent way, the professional gains control of her destiny. (p. 18)

Critically Reflective Teachers

The notion of teachers being critically reflective is not new (Dewey, 1904, 1933; Cruikshank, 1987; Zeichner, 1982; Korthagen, 1985; Gore, 1987). In fact, throughout the history of teacher education, efforts have been made to promote the growth of reflective thinking of teachers. The development of inquiry skills has often been the central aim in teacher programs. Reflective teaching has, in fact, become a part of the language of teacher education ever since Dewey (1904)

warned against the mechanical focus of teacher education "immediate skill may be got at the cost of power to go on growing" (p. 15).

Donald Cruikshank (1987), in his efforts to develop "wise teachers" through good habits of thoughtful teaching, developed the concept of Reflective Teaching. This practice can be described as a controlled clinical teaching experience where the teaching event should be viewed thoughtfully, analytically, and objectively.

The teaching experience concentrates mainly on a teaching process and divorces subject matter from teaching methodology. There are thirty-six fifteen minute lessons. Each lesson is classified according to the domains of learning (i.e., cognitive, psychomotor, and affective) and also on types of teaching behaviour (i.e., descriptive, demonstrative, and fostering attitude change) and works towards specific goals with observable and measurable outcomes (Cruikshank, 1987).

The reflective teaching process is important in that it facilitates an environment that is non-threatening and allows teachers in pre-service and inservice situations to practice, experiment, and share experiences. The process allows for reflection-in-action (Schon, 1983) and provides opportunities for communication about their "private puzzles and insights". Reflective teaching elucidates the importance of colleagialship, where teachers working in groups examine teaching behaviors.

Both Zeichner (1983) and Korthagen (1985) argue that Cruikshank's approach has a technocratic rationality which is narrow as it separates teaching from its political and social context. While teachers are encouraged to concentrate on technical skills, they are not encouraged to question existing practices and their effect on schooling. Zeichner and Korthagan draw heavily from Dewey's philosophy (1933) in which he states that "attitude and skills in the method of inquiry with attitudes of open-mindedness and whole heartedness are pre-requisite to reflective actions" (p.17). Zeichner argues that technocratic rationality can interfere with the aim of developing reflectivity and the ethical, moral, and political dimensions evidenced in critical theory. Technocratic rationality focuses on methodology and efficiency resulting in "decline of reason, ... therefore stultifies distorts and malforms individual and social growth" (Gibson, 1986, p. 6).

Teachers have the capacity to engage in practical reflection, their language has reflective evidence, and they have the ability to transform their understanding of reality. However, they do not engage in systematic critical reflection and there is a plethora of reasons given for not doing so (Holly, 1983; D'Andrea, 1986; Wildman & Niles, 1987).

Critical reflection in cognitive and affective dimensions is a very personalized process (Mezirow, 1981; Boud, Keough & Walker, 1985). Teachers prefer to work in safe environments and schools are often insular situations where personalized

belief systems and theories tend to get submerged in a "one right answer". Although peers and teachers should play a vital role in helping each other cope with the feelings and thoughts that surface, opportunities for interaction are very few indeed. Furthermore, systematic critical reflection has to be learned and practiced before it becomes habitual (Dewey, 1933). Teachers have the tendency to be altruistic, in that the needs of their students take priority and guilt feelings surface when they spend time in reflection. Schools are also not reflecting surfaces. The noise, routines, quick changes in pace, the lack of cognitive space create an environment that is not conducive for reflection. Teachers have complex roles (i.e., managing, reinforcing, socializing and programming for many students at many different levels) and fail to reflect upon the "highly personalized and artistic nature" of their teaching as well as the absence of a strong professional culture of shared experience (Glickman, 1985; Smyth, 1986; Dillon-Peterson, 1981). Teachers also need guided assistance in the initiation and carrying out the reflective process through learning discourse to construe meanings and gain insights of their teaching experiences so that their dysfunctional meaning structures can be transformed (Lindeman, 1926; Mezirow, 1976, 1981, 1990). Such assistance, if provided by the administrator or supervisor, may require them to assume reflecting positions at the risk of relinquishing their power and authority (Wildman & Niles,

1987; Smyth 1986). Mezirow (1990) points out that it is possible for individuals to be involved in critical reflection and not be aware that they are doing so. This may well be the case with teachers. However, it has been argued that the reticence among teachers to engage in critical reflection may be attributed to the absence of clearly articulated paradigms to undertake such a task (Smyth, 1984).

In a study on "Performance Appraisals" in Ontario (Hickcox et al., 1988), teachers affirmed that they rarely had opportunities for what they called "introspection" in their school day. Reflection was identified as the first step in professional growth. Evaluation systems were perceived by these teachers to be set up primarily for the purpose of complying with laws, policies, and contractual requirements directed towards protecting students from incompetent teachers. Criteria for maintaining competence were predominately instrumental (i.e., related to classroom process such as techniques of instruction, classroom management, and teacher-student relations). Self-evaluation and opportunities for reflection were rarely used. Evaluation was linked with minimum competence and emphasized the deficits while working on remediation of incompetent teachers as opposed to enrichment and growth of all teachers.

Almost seventy percent of teacher participants in the Hickox et al. (1988) study perceived evaluations to be "events endured", and felt that the degree of impact did not

commensurate with the amount of effort put into it. Teachers felt that although accountability is essential it was not sufficient to promote growth. Teachers felt it was important to acknowledge the need for change and be willing to be agents of their own development. Teachers expressed the need for recognition as individuals, not instrumentalists. They also expressed the need for non-evaluative support systems and a structured design for observation and reflection on growth on an on-going basis, as part of the process and incentives of the supervision and evaluation process.

Teachers as Adult Learners

In trying to maintain the image of the teacher as a professional (Goldhammer, 1969), a reflective technocrat (Cruikshank, 1987), and a critically reflective practitioner (Zeichner, 1983), there is a tendency to underscore the dimension of the teacher as an adult learner.

Recent literature in educational practice indicates the need to apply the basic principles of adult learning to form the cornerstone of teacher education and professional development. However, research in this field is still exploratory. Presently, programmes and inservice designed and implemented for teachers continue to use the basic tenets of learning theories valid for children as valid for adults. Darkenwald and Merriam (1982) comment on this:

The most notorious forms of miseducation found in the

> inservice education programs of many school systems .... School administrators decide what teachers need to learn, hire an outside expert to give a speech or workshop and then expect teachers to apply what they learn, if anything, to their work in the classroom. (p. 243)

Writers such as Dallelew and Martinez (1988), Moore (1988), Smyth (1986) continue to impress upon educators and administrators, the need to change their existing "pedagogical" mindset to an andragogical perspective (Knowles, 1974), so that appropriate growth-oriented environments can be provided for teachers. The challenge that administrators face is the effort required to maintain the role of the teacher as a professional and to recognize simultaneously the dimension of the teacher as an adult learner.

It has also been pointed out that generalizations on adult learning, growth, and development may not necessarily hold true for teachers. Such professional roles are hard to parallel and find (Dillon-Peterson, 1986; Gilckman, 1986; Smyth, 1986).

Gregore cited in Brundage & Mackeracker (1980), in a study on teachers as professionals, identifies a series of developmental phases (i.e., "Becoming, Growing, Maturing and Fully Functioning") that teachers progress through in their professional development or in new situations of their professional placement. Although he is not definite as to the

length of each phase, Gregore espouses that teachers move along a continuum from ambivalence to total commitment to teaching on the basis of personal values, goals and expectations that teaching holds for them. Within this continuum they move from dependency to self-directed and inter-dependent learning, as well as from low levels of ambiguity, tolerance, experimentation, and resistance to peer involvement to high levels of tolerance innovation, self-discovery, and collaboration with others. While Gregore's approach is significant in understanding how the teaching profession influences teacher learning, it does not really elucidate the impact it has on other areas of life (Brundage & Mackeracker, 1980).

There is evidence to suggest that teachers do not learn from periodicals (Little, 1982) or research projects (Stenhouse, 1978), but express an interest in testing what their years of experience have taught them (Wildman & Niles, 1987). They are holders and users of practical knowledge based on their experiences in classrooms and schools (Elbaz, 1981). Teachers are also said to be influenced to a greater extent by role models (Sprinthall & Sprinthall, 1980) and colleagues and peers (Berlak & Berlak, 1981). Teachers are unique in the way they learn. The insular nature of the physical structure, absence of a strong professional culture, and the constant proximity of young learners over a period of time form barriers to colleagueship.

Teachers tend to focus on their students' learning goals and processes and often need to understand how these contradict their own goals and processes as adults (Brundage & Mackeracher, 1980).

While child-learning goals focus on forming meanings, values, and strategies as well as socializing and conforming to group norms, adult learning goals focus on transforming meanings, values, skills as well as personal problem solving of role behavior.

Brundage and Mackeracher (1980) point out that teachers require two sets of learning-related behaviors: the one to promote learning in others, and the other to guide learning behaviors in self. Each of these require a unique set of skills. Learning-related behaviors to promote learning in others require

> one's awareness of self in relationship; communicating skills; ... interviewing skills, ability to use projective models; ability to flex immediate circumstances, skills in clarifying and reflecting, skills in managing conflict, leading and following, skills on relevant feedback. (p. 89)

Learning-related behaviors for guiding change in self include:

> inquiry skills, learning how to learn, observing skills, linguistic skills, ... tolerance for

> ambiguity, self-awareness, ability to utilize one's own experience, ability to utilize the resources and feedback through observing, judging and modifying one's own behavior as it occurs. (p. 88)

Perhaps the most significant aspect is that a teacher's meaning of learning has been so encapsulated in the world of formal education and related to educational requirements, that his/her perceptions of learning are often limited to student learning or learning for non-responsible status of society. While there are basic generalizations made about teachers as learners in that teachers are assumed to learn when they can enrich and reorganize what they already know in the global context of their lives (Brundage and Mackeracher, 1980), it is not clear whether or not teachers view themselves in learner roles as part of their occupation. This is particularly important because it is pointed out that adults who have difficulty internalizing learner roles are under substantial restraint in the realization of their own potential (Brundage & Mackeracher, 1980). One of the realities of school is that teachers possess their own theories of what they do and what is feasible. Change is likely to occur when the starting point becomes the understanding of where teachers are in terms of understanding themselves, their work, and their work context (Smyth, 1984).

Summary of the Review of the Literature

Because this study attempts to describe teachers as adult learners, the chapter began with a review of adult education. It established historical links between John Dewey (1933), Edward Lindeman (1926), and Mezirow (1981, 1989, 1990) in the development of an adult learning theory. Mezirow's theory of Perspective Transformation (1981) was described at length because it provides a theoretical framework for this study. The chapter continued by outlining the concepts of teacher supervision and evaluation to elucidate how this process, used in educational practice, is not conducive to adult learning principles and empowering teachers to take ownership of their learning. The clinical supervision process (Goldhammer, 1969), popularly used, claims to empower teachers to be agents of their professional development. But it has been argued that this is not the case since reflection with critical intent is not being addressed in such a process.

The chapter goes on to discuss how a great many factors built into the teaching profession and in the life of schools militate against critical reflective thinking. These have far-reaching effects on teachers' ability to be self-monitoring, and self-directing, and on their perceptions of themselves in learner roles.

CHAPTER THREE

METHODOLOGY

Research Design

A quantitative descriptive research design guided this inquiry. Survey research of a cross sectional nature was conducted. A survey instrument was developed by the researcher to collect data describing teachers' perceptions of themselves as adult learners. The statistical methodology explored the relationships between critical reflection and other concepts of transformative learning (Mezirow, 1981).

Population

The participants of this study were elementary school teachers. They were drawn from the geographic boundaries of a specific Catholic School Board because it was convenient to the researcher. Teachers from forty-six elementary schools participated. Teachers of two Francophone schools were not included because of the language difficulties anticipated by the researcher. Two additional school staffs did not participate at the discretion of the principals. Eight hundred twenty-five surveys were mailed and there were three hundred twenty-five returned surveys, a 39.39 percent response rate. Twenty responses were returned because the teachers were no longer in the school, two others were omitted. Three

hundred and three responses formed the sample of the study. It was not possible to do random sampling or know whether or not the sample was representative of the population. There were two hundred forty-five or 82.5 percent females, fifty-two or 17.2 percent males, and six teachers who did not report their sex.

There were two hundred twelve or 71.6 percent class room teachers and eighty-one or 28.4 percent others (teachers described as special education resource, itinerant teachers, librarians, and French teachers). Seven teachers did not report their teaching positions. Teachers involved in administrative roles such as principals, vice-principals, assistants to the principals, as well as consultants of curriculum and special assessment remediation teachers were not included in this study.

Instrument

A survey instrument was developed by the researcher in an attempt to operationalize Mezirow's Theory of Perspective Transformation (1981) as it pertains to teachers as adult learners. The survey was pilot tested before it was administered to the sample so that reliability and validity could be established. It was a two-part survey. The first part used a contingency question approach to collect demographic information on teachers in terms of gender, age, and years of teaching experience. It also asked for

information on: formal education, number of certificates and additional courses; involvement in the number of committees and extra curricular school activities; responsibilities in terms of teaching assignment, division levels taught; school enrollment; school description in terms of inner city or rural. (Appendix C contains Part 1 - a copy of the instrument).

The second part of the survey consisted of sixty-two statements in four sub-scales:

(1) Adult Learning;
(2) Critical Reflection;
(3) Meaning Perspectives; and
(4) New Insights.

A four-point Likert scale was used to indicate the degree to which respondents agreed or disagreed with each statement. The Adult Learning sub-scale elucidated the concept of self-directed learning (Knowles, 1984), in terms of initiatives in learning. For example:

(1) I prefer to take initiatives in my own learning.
(2) I set the direction for my learning goals.
(3) I set my own pace in learning situation.
(4) I prefer to be an independent learner.

Other facets of adult learning (Brundage & Mackeracher, 1980) were also included in terms of:

(1) learning as a process for self-discovery;
(2) experience as a process of learning;
(3) joy of learning;
(4) team approach and learning; and
(5) feedback and learning.

An analytical, questioning, and challenging stance formed the basis of the Critical Self-Reflection sub-scale. These statements reflected on the basic taken-for-granted assumptions and presuppositions of general orientations of "knowing, perceiving, believing, and acting" (Mezirow, 1990). Some examples of these statements are:

(1) It is important for me to analyze why I make the assumptions I make.
(2) I challenge the process I use for problem solving.
(3) I question some of the attitudes I assume.

Statements in the Meaning Perspectives Sub-scale were developed on concepts that were meaningful to teachers:

(1) instructional strategies;
(2) inservice;
(3) planning and organization;
(4) mandated curriculum;
(5) access to other people's expertize;
(6) interaction with others;
(7) accountability;
(8) feelings of self; and
(9) socially accepted conventions.

Statements in this sub-scale also used a questioning, challenging, and analytical stance. Examples of some of the statements are:

(1) I question the way I access other people's expertize.
(2) I find I challenge the process of accountability.
(3) Self-analysis leads to positive, negative feelings of self.

The statements of the New Insights sub-scale elucidated an aspect of perceived increased awareness or a desire to want to change as a result of the questioning, challenging, and

analyzing stance or coming face-to-face with the issues of teaching practice. Some examples of this are:

(1) I gain new insights when I reflect on old experiences.
(2) My confidence is enhanced through self-analysis.
(3) Questioning increases my desire to be more vocal about inequalities in the profession.

There are other statements included on:

(1) taking risks;
(2) options for personal development;
(3) instructional approaches;
(4) power struggles; and
(5) improvement goals.

Pilot Study

The pilot study was conducted in two phases to establish the validity and reliability of the instrument. In the first phase five Brock University graduate students conducted an expert review to increase content validity. These experts were asked to indicate the difficulties experienced with (1) the readability of the printed format, (2) clarity of instructions, (3) contextual ambiguities, and (4) any other difficulties experienced in completing the survey so as to minimize error variance. When the ambiguities were removed

and statements deleted, the revised format was reduced to fifty-one items. This was distributed to eighteen teachers in the second phase of the pilot study. The participants of the pilot were also asked to (1) complete the survey, (2) comment on the readability of the format, and (3) point out other ambiguities and difficulties that they had experienced.

The data collected were entered into the data bank of a computer and analyzed by the computer program - Statistical Package for Social Sciences (SPSSX) (Nie, Hull and Jenkins, 1975). The items were analyzed. Since each sub-scale (Adult Learning, Critical Reflection, Transformative Learning) had more than one item, a reliability coefficient was used to examine each one and the results were as follows:

Adult learning	0.82
Critical Reflection	0.86
Personal/Professional Meaning Perspectives	0.76
New Insights	0.72

The total reliability coefficient was estimated at 0.94 (Cronbach Alpha) which was high enough to support that this instrument be used in the study. Furthermore, in order to increase the validity of test items, a frequency distribution of each item was computed and items with an extremely low variance were noted.

Inter-item correlations between items of each sub-scale

were established. Those items with a negative relationship with other scale items, low reliability, and high response frequency were eliminated from the final test instrument. Part two of the instrument now had forty-one items, distributed as follows:

Adult Learning Sub-scale - twelve items;
Critical Reflection Sub-scale - twelve items;
Meaning Perspectives Sub-scale - nine items; and
New Insights Sub-scale - eight items.

The instrument was now ready to be mailed to the rest of the teachers of the Board (see Appendix D contains Part 2 copy of the survey).

Data Collection and Recording

Prior permission to conduct the survey was obtained from the Superintendent of Operations of the School Board. The researcher was also granted permission to access the Board's internal mail system. This proved to be both cost and time effective. A letter was addressed to each school principal, outlining the purpose and nature of the study and a request for assistance and cooperation. This facilitated the speed of returns (see Appendix A for a copy of the letter to principals).

A brief introductory letter dealing with the issue of confidentiality, outlining the nature and importance of the study, and procedural directives was addressed to each potential respondent (see Appendix B for a copy of letter to teachers). Each respondent was mailed a package which included an introductory letter, the survey instrument Part 1 and 2, and a self-addressed envelope. There was a two-week time span provided for the returns through the School Board's internal mail. Thirty-nine percent of the subjects returned their surveys. They were used to form the sample of the study.

Each survey was scanned individually to ensure that crucial questions were answered. Two surveys had to be discarded as a result of critical errors. Missing data were given coded values. The demographic data of the sample and answers to the Likert scale (Part 2 of the survey) were coded according to the values that were predetermined. These codes were entered into the data bank of the computer. Results of the statistical analysis will be presented in chapter four.

CHAPTER FOUR

FINDINGS

Overview

Frequencies of responses and percentages were tabulated for the demographic data and the responses of items on the four sub-scales (Adult Learning, Critical Reflection, Personal and Professional Meaning Perspective,and New Insights). Descriptive statistics were calculated. A correlational analysis in terms of the Cronbach Alpha and Pearson 'r' correlations were computed to establish the relationships among items. Cross tabulations were performed in order to describe any differences in responses across demographic variables.

Demographic Data Analysis

The demographic data collected in Part 1 of the survey are described in terms of frequency distributions and percentages.

Table 4.1 presents data on gender, age, teaching experience, teaching assignments, divisions taught, and the number of extra-curricular activities. The number of female teacher participants exceeded male teachers by 63%. With regards to age, 2% of the teachers were under twenty-five years, 7.9% were between 51 and 65 years, 77.6% between 31 and 50 years of

age. There were 15.2% intermediate teachers, 15.5% pre-primary, 28.1% primary, and 22.1% junior level teachers. More than 19.1% did not report the divisions they taught. In terms of years of teaching experience, 17.8% had less than five years, 16.2% had 6 to 10 years, 38.9% had 11 to 20 years, 21.8% between 21 to 30 years, and 4% over 31 years of teaching. Nearly 70% of the teachers were classroom teachers.

Teacher Educational Levels

Table 4.2 provides frequencies and percentages of teachers' educational qualifications. About 69.6% of the sample had a Bachelors degree, 40.6% reported they had one to three certificates, while 28.4% stated they had no certificates at all. Also, 4% reported they had no courses and 53.8% of the sample did not report whether or not they had any courses. While 15.2% reported that they were not involved in any extra curricular activities, nearly 9.2% stated that they were involved in over five extra curricular activities.

School Characteristics

Table 4.3 provides descriptive data on the size of school population, class size, and whether or not teachers perceived their school to be an inner city or rural school. A number of teachers, that is 75.2%, reported they taught in rural schools and 49.8% came from a 250 - 500 population sized school.

Table 4.1

Demographic Variables: gender, age, teaching experience, teaching assignment, divisional assignment, frequencies, and percentages of responses.

Category	Value labels	n	%
Gender	Male	52	17.2
	Female	245	80.8
	Not reported	6	2.0
Age	Under 25	6	2.0
	25 - 30	34	11.2
	31 - 40	103	34.0
	41 - 50	132	43.6
	51 - 65	24	7.9
	Not reported	4	1.3
Experience Teaching	1 - 5 years	54	17.8
	6 - 10 years	49	16.2
	11 - 20 years	118	38.9
	21 - 30 years	66	21.8
	Over 31	12	4.0
	Not reported	4	1.3
Teaching Assignment	Classroom	212	70.0
	Special Ed. Resource	36	11.9
	Other (Itinerants) (Librarians)	48	15.8
	Not reported	7	2.3
Divisions	Pre-primary	47	15.5
	Primary	85	28.1
	Junior	67	22.1
	Intermediate	46	15.2
	Not reported	58	19.1

Table 4.2

Teachers' Education Levels: degrees, courses, certification, extra-curricular involvement, frequencies, and percentages of responses.

Label	Teacher's Education	n	%
Degree	No degree	52	17.2
	B.A. / B.Sc. / B. Ed.	211	69.6
	Masters	34	11.2
	Not reported	6	2.0
Other Courses	No courses	12	4.0
	1 - 3	95	31.4
	4 - 6	27	8.9
	Over 7	6	2.0
	Not reported	163	53.8
Other Certificates	No certificates	86	28.4
	1 - 3	123	40.6
	4 - 6	37	12.2
	Over 7	29	9.6
	Not reported	28	9.2
Extra Curricular Activities In School	None	46	15.2
	less than 3	102	33.7
	3 - 5	120	39.6
	Over 5	28	9.2
	Not reported	7	2.3

Table 4.3

School Characteristics: type (inner city or rural), size, class size, frequencies and percentages of responses.

Label	Label	n	%
School Type	Inner City	69	22.8
	Rural	228	75.2
	Not reported	6	2.0
Size Of School Population	Less than 250	77	25.4
	251 - 500	151	49.8
	Over 500	70	23.1
	Not reported	5	1.7
Class Size	15 and Under	26	8.6
	16 - 25	149	49.2
	Over 25	106	35.0
	Not applicable	10	3.3
	Not reported	12	4.0

Sample

In conclusion, the sample may not have been representative of the population in that 81% of the sample were females. About 78% were between the ages of 31 and 50 years, while only six teachers or two percent under twenty-five years of age. Seventy-one percent of the teachers were classroom teachers and 39% had between 11 to 20 years of teaching experience. Over 70% of the teachers held a bachelors degree. However, statistics on the total population were not available.

Correlation Analysis

Part two of the survey consisted of forty-one items in four sub-scales. Each item was a statement to which teachers agreed or disagreed on a Likert-like four-point scale. A reliability analysis on each sub-scale is presented in Table 4.4. The Cronbach Alpha was considered acceptable. It was the highest for Critical Reflection (.849) and the lowest for Adult learning (.695). Items on Critical Reflection have the highest variance (27.66) and Adult Learning the lowest variance (13.16).

Table 4.4

Reliability Analysis of the sub-scales: Adult learning, Critical reflection, Meaning perspectives, New insights..

Label	N	Cronbach Alpha	Variance	Mean	Standard Deviation
Adult Learning	251	0.695	13.16	20.08	3.62
Critical Reflection	251	0.849	27.66	23.97	5.26
Meaning Perspectives	251	0.785	14.88	17.58	3.86
New Insights	251	0.844	24.37	22.31	4.94

Adult Learning Sub-scale

Table 4.5 (i) presents frequencies and Table 4.5 (ii) mean and standard deviations of responses to the twelve items of the Adult Learning sub-scale. Teachers reported that they took initiatives in learning situations. Only three (or 1%) of the teachers (M=1.40, SD=0.514) disagreed with the statement "I prefer to take initiates in my own learning". Seven (or 2.3%, M=1.5, SD=0.547) disagreed with the statement "I set the directions for my learning goals". Sixteen (or 5.3%, M=1.61, SD=0.586) disagreed with "I usually take initiatives in formulating my learning activities" and 15 (or 5%, M=1.66, SD=0.574) indicated that they disagreed with the statement "I set my own pace in learning situations". Two hundred ninety-nine (or 98.7%, M=1.27, SD=0.473) agreed; of these, 72.6% strongly agreed, that "experience is a process of learning". Two hundred ninety-two (or 96.4%, M=1.27, SD=0.473) agreed, of which 63.8% strongly agreed, that "learning is enhanced when I participate in the process". One hundred sixty-four (or 54.5%, M=1.51, SD=0.622) strongly agreed and 122 (or 40.3%) agreed that they "derived a great deal of joy from learning". Two hundred eighty-seven (or 94.8%, M=1.57, SD=0.592) agreed that regular feedback enhances learning in most situations. It was interesting to note that 124 (or 41.1%, M=2.62, SD=0.793) of the teachers stated that they "prefer someone to direct them in learning situations". Seventy-one (or 23.4%, M=1.96, SD=0.779) disagreed with the

statement "I prefer to be an independent learner". Eighty (or 26.4%, M=1.97, SD=0.814) disagreed with "a team approach in learning situations facilitates learning for me".

Pearson 'r' Correlations - Adult Learning

Table 4.6 presents a Pearson correlational matrix on the twelve items of the Adult Learning sub-scale. There was a pattern of low internal consistency between some of the items. There was also significant positive relationships between #1 ("taking initiatives in learning"), #37 ("taking initiatives in formulating one's learning activities"), and #5 ("setting directions in one's learning goals"). Negative relationships existed between #1 ("taking initiatives with learning") and #23 ("preferring direction in learning situations"). In fact, item #23 had negative relationships and very low positive relationships with several other items. There were also significant positive relationships between #37 ("taking initiatives in formulating learning activities"), #28 ("deriving a joy out of learning"), and #30 ("exploring innovating ways of doing old things").

There was a significant positive correlation between #16 ("participation in a process") and #25 ("regular feedback in regular learning situations"). A significant positive relationship also existed between #16 ("participation in a process") and #10 ("for me experience is a process of learning").

Table 4.5 (I) Adult Learning Sub-scale

Adult Learning sub-scale - Teacher responses in frequencies, percentages, mean, and standard deviations.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
1	I prefer to take initiatives in my learning.	186	61.4	114	37.6	3	1.0	0	0.0	0	0.0
23	I prefer someone to direct me in learning situations.	26	8.6	98	32.3	140	46.2	36	11.9	3	1.0
5	I set the directions for my learning goals.	153	50.5	143	47.2	7	2.3	0	0.0	0	0.0
37	I usually take initia -tives in formulating my learning activities.	136	44.9	147	48.5	16	5.3	0	0.0	4	1.3
19	I set my own pace in learning situations	112	37.0	174	57.4	15	5.0	1	0.3	1	0.3
20	A team approach in learning situations facilitates learning for me.	88	29.0	129	42.6	69	22.8	11	3.6	6	2.0

(Table 4.5 (i) continues)

Table 4.5 (I) Adult Learning Sub-scale

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
26	I prefer to be an independent learner	89	29.4	138	45.5	67	22.1	4	1.3	5	1.7
10	For me experience is a process of learning.	220	72.6	79	26.1	3	1.0	0	0.0	1	0.3
16	Learning is enhanced when I participate in the process.	192	63.4	100	33.0	8	2.6	1	0.3	2	0.4
30	Learning situations help me explore different ways of doing old things.	124	40.9	157	51.8	15	5.0	2	0.7	5	1.7
28	I derive a great deal of joy from learning.	165	54.5	122	40.3	14	4.6	2	0.7	0	0.0
25	Regular feedback enhances learning in most situations.	141	46.5	146	48.2	10	3.3	3	1.0	3	1.0

Table 4.5 (ii) Adult Learning Sub-scale Mean and Standard Deviation

Item	$\bar{x}$	SD	N
1	1.40	0.510	251
23	2.62	0.793	251
5	1.50	0.547	251
37	1.61	0.586	251
19	1.66	0.574	251
20	1.97	0.814	251
26	1.96	0.779	251
10	1.27	0.473	251
16	1.39	0.550	251
30	1.64	0.612	251
28	1.51	0.622	251
25	1.57	0.592	251

Table 4.6

Pearson 'r' Correlations between items on Adult Learning Subscale.

0	1	5	10	16	19	20	23	25	26	28	30	37
1												
5	** .34											
10	** .24	** .34										
16	** .20	** .26	** .40									
19	.22	** .30	** .16	** .22								
20	.05	.01	.09	.12	.06							
23	** .16	** -.14	-.03	-.05	.04	.13						
25	.13	* .14	** .20	** .41	.08	.16	.04					
26	** .26	** .21	.07	* .18	* .15	* -.17	* -.15	.13				
28	** .22	** .31	** .20	** .31	** .22	** .16	-.04	** .33	** .17			
30	.13	** .23	** .22	** .31	** .21	** .26	.09	** .31	.08	** .37		
37	** .42	** .48	** .30	** .38	** .36	.06	-.12	** .29	** .28	** .42	** .41	

* - significant correlations

Critical Reflection

Table 4.7 (i) presents frequency responses and Table 4.7 (ii) presents mean and standard deviation of the twelve items of the Critical Reflection sub-scale. Teachers in general agreed that they used critical reflection learning. It was most interesting to note that 269 (88.8%, M=1.67, SD=0.670) agreed with #15 ("it is important for me to look below the surface of things"), and 271 (or 89.5%, M=1.58, SD=0.673) agreed with #38 ("analyzing what is of primary importance in my life is something I usually do"). About 89% or 269 (M=1.75, SD=0.627) agreed with #39 ("I try to be particularly conscious of the forces that attempt to control me"). However, 149 (or 49.2%, M=2.42, SD=0.808) disagree with the statement #24 ("I find I challenge socially accepted conventions").

Pearson 'r' Correlation - Critical Reflection

The Pearson correlation matrix between the items on the Critical Reflection sub-scale is presented in Table 4.8. There are twelve items in this sub-scale and the overall internal consistency is acceptable. Item #31 ("It is important for me to reexamine my motives for doing things") has a pattern of significant positive correlations with six other items (r = 0.42, 0.40, 0.43, 0.46, 0.41 and 0.46). Item #27 ("I find I often analyze the reason for my uncertainties") has a pattern of significant positive correlations with five

other items (r = 0.43, 0.44, 0.45, 0.45, 0.46). There are a significant positive correlations between item #12 ("I challenge the process I use for problem solving") and three other items (r=0.45,0.41, 0.40).

Meaning Perspectives

Table 4.9 (i) presents the frequencies, percentages, mean and standard deviation of the nine items of the Meaning Perspectives sub-scale. There were 36.5% who disagreed, and 40.5% agreed and 21.6% who strongly agreed with the statement #32 ("I often challenge the purpose of mandated curriculum") (M=2.15, SD=0.780). Also, for item #14 ("I find I challenge the process of accountability"), there were 31.4% that disagreed, 2.3% strongly disagreed, 43.6% agreed and 18.8% who strongly agreed with the statement (M=2.18, SD=0.765). There were 273 (or 90.1%, M=1.60, SD=0.611) of teachers who agreed that (#34) they usually sought to gain control of there teaching goals. Also, 277 (or 91.4%, M=1.87, SD=0.678) agreed that #13 ("self-analysis led to positive negative feelings about self"). It was interesting to note that 41 or 13.5% disagreed with the statement #29 ("self-analysis leads me to alternate ways for self-evaluation").

Table 4.7 (i)

Critical Reflection Sub-scale - Teachers responses in frequencies, percentages, mean and standard deviation.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
6	It is impor-tant for me to analyze why I make the assump-tions I make.	97	32.0	149	49.2	46	15.2	5	1.7	6	2.0
12	I challenge the process I use for problem solving.	44	14.5	162	53.5	82	27.1	5	1.7	10	3.3
15	It is impor-tant for me to look below the surface of things.	131	43.2	138	45.6	29	9.6	1	0.3	4	1.3
17	I question some of the attitudes I assume.	64	21.1	163	53.8	68	22.4	6	2.0	2	0.7
18	In general I often reanalyze the stand I take about issues.	47	15.5	162	53.5	78	25.7	6	2.0	10	3.3
21	I often question the biases I have about issues.	46	15.2	156	51.5	88	29.0	8	2.6	5	1.7

(Table 4.7 (i) continues)

Table 4.7 (i)

Critical Reflection Sub-scale.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
24	I find I challenge socially accepted conventions.	45	14.9	105	34.7	132	43.6	17	5.6	4	1.3
27	I find I often analyze the reason for my uncertain -ties.	61	20.1	158	52.1	68	22.4	7	2.3	9	3.0
31	It is impor -tant for me to re-examine my motives for doing things.	61	20.1	164	54.1	65	21.54	8	2.6	5	1.7
38	Analyzing what is of primary importance in my life is something I usually do	146	48.2	125	41.3	23	7.6	4	1.3	5	1.7
39	I try to be particularly conscious of the forces that attempt to control me.	106	35.0	163	53.8	28	9.2	1	0.3	5	1.7
41	I often find that I re-analyze the uniqueness of my ideas.	52	17.2	141	46.5	97	32.0	5	1.7	8	2.6

Table 4.7 (ii)

Critical Reflection - Mean and Standard Deviation

Item	$\bar{x}$	SD	N
6	1.87	0.741	251
12	2.13	0.687	251
15	1.67	0.670	251
17	2.04	0.725	251
18	2.14	0.700	251
21	2.17	0.726	251
24	2.42	0.808	251
27	2.05	0.722	251
31	2.04	0.729	251
38	1.58	0.673	251
39	1.76	0.627	251
41	2.17	0.747	251

Table 4.8

Pearson 'r' Correlations between items in the Critical Reflection sub-scale.

0	6	12	15	17	18	21	24	27	31	38	39	41
6												
12	** .45											
15	** .34	** .21										
17	** .34	** .33	** .29									
18	** .36	** .41	** .22	** .51								
21	** .30	** .33	** .15	** .50	** .47							
24	** .13	** .15	** .34	** .25	* .15	* .18						
27	** .43	** .33	** .29	** .44	** .45	** .46	* .18					
31	** .42	** .40	** .25	** .43	** .46	** .41	* .15	** .46				
38	** .36	** .24	** .25	** .25	** .23	** .30	* .14	** .24	** .23			
39	** .30	** .18	** .31	** .21	** .22	** .25	** .23	** .28	** .28	** .50		
41	** .40	** .36	** .24	** .35	** .35	** .33	** .34	** .35	** .31	** .26	** .35	

* - significant correlations

Table 4.9 (i)

Meaning Perspectives - Teachers responses in frequencies, percentages, mean and standard deviations.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
3	I analyze the process I use for planning and organizing.	111	36.6	158	52.1	33	10.9	1	0.3	0	0.0
7	I question the way I access other peoples' expertise.	43	14.2	122	40.3	109	36.0	18	5.9	11	3.6
13	Self-analysis leads to identification of positive and negative feelings about myself.	117	38.6	160	52.8	20	6.6	3	1.0	3	1.0
14	I find that I challenge the process of accountability.	57	18.8	132	43.6	95	31.4	7	2.3	12	4.0
22	It is important for me to review my plans and strategies for inservice.	59	19.5	176	58.1	54	17.8	8	2.6	6	2.0

(Table 4.9 (i) continues)

Table 4.9 (i)

Meaning Perspectives Sub-scale.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
29	Self-analysis leads me to alternate ways for self-evaluation.	80	26.4	170	56.1	38	12.5	3	1.0	12	4.0
32	I often challenge the purpose of mandated curriculum.	64	21.6	120	40.5	108	36.5	4	1.4	7	2.3
34	I usually seek to gain control of my teaching goals.	122	40.3	151	49.8	20	6.6	0	0.0	10	3.3
35	I reassess the process I use to interact with my colleagues.	65	21.5	172	56.8	52	17.2	6	2.0	8	2.6

Table 4.9 (ii)

Meaning Perspectives - Mean and Standard Deviation.

Item	$\bar{x}$	SD	N
3	1.75	0.679	251
7	2.33	0.809	251
13	1.68	0.647	251
14	2.18	0.765	251
22	2.02	0.701	251
29	1.87	0.678	251
32	2.15	0.780	251
34	1.65	0.611	251
35	1.97	0.669	251

Pearson 'r' Correlation - Meaning Perspectives

Table 4.10 presents the Pearson correlation matrix for the Meaning Perspectives sub-scale. There are nine items and the internal consistency of the items are acceptable. It was very interesting to note that item #29 ("self-analysis leads me to alternate ways of self-evaluation") had significant positive relationships with items #3, #7 , #13, #14 and #35.

Table 4.10

Pearson 'r' Correlations between items on Personal/Professional Meaning Perspectives Sub-scales.

0	3	7	13	14	22	29	32	34	35
3									
7	** .34								
13	* .15	** .31							
14	* .17	** .41	** .33						
22	** .30	** .34	** .28	* .18					
29	** .42	** .41	** .41	** .40	** .35				
32	* .16	** .20	** .12	** .28	.10	** .26			
34	** .24	** .20	** .37	** .19	.12	** .26	* .30		
35	** .22	** .31	** .38	** .30	** .35	** .40	* .19	** .42	

* - significant correlations

New Insights

The frequencies of responses and mean and standard deviations of the New Insights sub-scale are presented in Table 4.11 (i) and Table 4.11 (ii) respectively. There are eight items in this sub-scale. There were 295 (or 97.4%, M=1.62, SD=0.54) of the teachers who agreed with #2 ("I gain new insights when I reflect on old experiences"). Also, 297 (or 98%, M=-1.56, SD=0.543) that agreed with #4 ("I increase my awareness for areas of improvement once I reflect on them"). About 86 teachers (or 28.5%, M=2.07, SD=0.740) disagreed with #40 ("I find I take some professional risks after self-analysis") and 63 (or 20.8%, M=1.97, SD=0.742) disagree with #8 ("questioning basic assumptions increases my desire to be more vocal about inequalities").

Pearson 'r' Correlation - New Insights

Table 4.12 includes the Pearson correlation matrix of the eight items of the New Insights sub-scale. Although there are significant positive relationship between items, the internal consistency between all items is generally low.

Table 4.11 (i)

New Insights - Teachers responses in frequencies, percentages, mean and standard deviations.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
2	I gain new insights when I reflect on old experien-ces	123	40.6	172	56.8	8	2.6	0	0.0	0	0.0
4	I increase my awareness about areas for improve-ment once I reflect on them.	139	45.9	158	52.1	6	2.0	0	0.0	0	0.0
8	Questioning basic assumptions increases my desire to be more vocal about in-equalities.	80	26.4	151	49.8	58	19.1	5	1.7	9	3.0
9	I find alternate innovative instruction-al approach-es after I do some soul searching.	88	29.0	175	57.8	32	10.6	4	1.3	4	1.3
11	My confid-ence is enhanced through self-analysis.	93	30.7	164	54.1	41	13.5	2	0.7	3	1.0

(Table 4.11 (i) continues)

Table 4.11 (i)

New Insights - Sub-scale.

	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Missing	
		n	%	n	%	n	%	n	%	n	%
33	The more I reflect, the greater awareness I have of the power strug-gles that exist in the profession.	133	43.9	125	41.3	35	11.6	5	1.7	5	1.7
36	I discover options for personal development as a result of self-evaluation.	71	23.4	188	62.0	31	10.2	2	0.7	11	3.6
40	I find that I take some professional risks after self-analysis.	59	19.5	151	49.8	79	26.1	7	2.4	7	2.4

Table 4.11 (ii)

New Insights - Mean and Standard Deviation.

Item	$\bar{x}$	SD	N
2	1.62	0.541	251
4	1.56	0.543	251
8	1.97	0.742	251
9	1.82	0.654	251
11	1.81	0.670	251
33	1.69	0.725	251
36	1.87	0.619	251
40	2.07	0.745	251

Table 4.12

Pearson 'r' Correlations between items on the New Insights sub-scales.

0	2	4	8	9	11	33	36	40
2								
4	** .39							
8	** .17	** .21						
9	** .22	** .35	** .25					
11	** .26	** .28	** .26	** .31				
33	** .19	* .14	** .33	.10	.13			
36	** .33	** .35	** .24	.28	** .35	** .30		
40	.11	** .20	* .21	** .28	** .27	** .15	** .37	

* - significant correlations

CHAPTER FIVE

SUMMARY OF FINDINGS

Overview

This final chapter will present a) a discussion of the findings in relation to the theory and previous literature, b) practical implications of the study, and c) implications of the study for future research.

Discussion

The findings from the four sub-scales (Adult learning, Critical Reflection, Meaning Perspectives, and New Insights) of the instrument used in this study seem to suggest that it is possible to make reasonable inferences about teachers as learners, as well as comment about the way teachers conceptualize critical reflection and transformative learning.

The sample in this study expressed a preference for designing their own learning and making choices for themselves in learning situations. Such findings are consistent with the concepts of self-directed learning as elucidated in the review of literature on adult learning (Knowles, 1984; Brundage & Mackeracher, 1980; Brookfield, 1980). However, a number of teachers did indicate their preference for direction in learning and this seems to contradict what they had stated before. The literature on adult learning, however, postulates

that a truly self-directed learner recognizes when self-directed learning is a more advantageous way to learn (Herberson, 1990). Suspension of self-direction is said to occur when some adults have few opportunities to develop self-directed behaviors. It is also said to be suspended when a person is in a new learning situation and may need support systems (Brookfield, 1985; Cranton, 1989; Brundage & Mackeracher, 1980). The findings in this study are interesting in that teachers with less teaching experience and of younger than 25 years of age expressed a need for direction. This was also the case with (1) pre-primary and primary teachers, (2) those teachers who were 51 years and older, and (3) teachers who did not hold any degrees in education. Teachers also indicated that they took a great deal of joy in learning. Participation in the experience and feedback enhanced new learning experiences for them.

The review of literature postulates that teachers seldom see themselves as members of a team. Barriers to colleagueship are said to arise from the cellular nature of the physical structure of schools. Teachers are said to retreat from the world within the school, as well as the world outside (Lortie, 1975; Alphonso and Goldsberry, 1982). In this study a relatively small number of teachers; (i.e., more females, teachers with higher education, and teachers with teaching experiences of between eleven to twenty years) agreed that the team approach did not facilitate learning for them.

The reasons provided for the skepticism that exists about teachers being critically reflective in the teaching situation are many (Zeichner, 1982; Cruikshank, 1985; Clarke & Yinger, 1977). However, teachers in this study projected that they employed an analytical, questioning, and challenging stance in relation to issues, biases, attitudes, and basic assumptions in their roles as teachers. Some writers (Brookfield, 1987; Mezirow, 1990) point out that it is possible to be involved in a critically reflective process and not be aware that one is doing so. Teachers also indicated that the self-analysis, and the stance of questioning and challenging provided them with new insights and increased awareness about issues in their teaching practice in terms of planning and organizing strategies for inservice, use of resources and expertize, and the power struggles that existed in the profession. These responses describe behaviors that suggest that teachers are being transformed and gaining new perspectives (Mezirow, 1989; 1990). The greater majority of teachers in this study made references about transformations that had taken place in terms of their confidence being enhanced, taking professional risks, and discovering options for personal development.

A number of teachers indicated that they did not challenge mandated curriculum. The responses were more evident in pre-primary teachers, teachers who held bachelors degrees, and teachers who held one to five years teaching experience. Some teachers also indicated that they did not

challenge the process of accountability. Such responses were more from teachers with one to five years teaching experience, those teachers who held a Masters degree, and teachers who taught Intermediate grades and pre-primary grades. There were also more pre-primary and primary teachers, teachers with less than 20 years teaching experience, females, and teachers who held no degrees that indicated that they did not challenge socially accepted conventions. The review of literature postulates that the above issues of mandated curriculum, accountability, and socially accepted conventions are closely linked with issues of supervision, evaluation, and the model of unilateral control which is said to have a tendency to reward teachers that tend to conform to the norms of the teaching environment (Goldhammer, 1969; Smyth,1986; Gitlin and Smyth, 1989; Garmen, 1986).

Practical Implications

The inferences made from this investigation are important in teaching practice and have practical implications for both teachers and administrators in professional development, inservice, and teacher supervision and evaluation. However, it is important to remember that the results of survey research are not conclusive and one should be cautious about making generalizations about these findings (Galfo, 1983; Cates, 1985).

The image of the teacher as an active learner is often espoused but also often forgotten and ignored in teaching practice both by teachers themselves and supervisors. Yet teachers are expected to be a catalyst for the learning of their students. Valverde (1982) postulates "teachers will not give to their students what they themselves do not have .. the belief of self-worth, internal motivation to continue to learn and the time and autonomy to be self-directed learners" (p. 81). The inferences made in this study are important for teachers to "see-self-as-learners" and for administrators in their delivery of inservice programs as well as in supervision and evaluation. Serious consideration should be given to encouraging teachers to identify resources, inservice plans, strategies, determined activities, and time to be pursued in enriching and updating themselves. However, what is being posited in this study is an alternative. The arguments presented emphasize the need for the viability of such a learning alternative.

Although the skills of self-reflection and the importance of its role in teaching practice are gaining more recognition, implementation within the teacher supervision and evaluation and inservice programs are not supported or accredited with the system. It is, therefore, natural for teachers not to recognize the validity of their own and their colleagues reflection as a means for personal growth. Transformative learning should be perceived as a strategic goal that requires

fostering. Rational discourse is vital to the process so that the ideas expressed by teachers are validated and the insights that result lead to action (Mezirow, 1990; Brookfield, 1987).

The whole process of transformative learning involves an element of risk taking because it is threatening to one's self-concept. It is important for administrators and supervisors to have a good working knowledge of the process and implications of transformative learning and the potential it has for collective social action (Mezirow, 1990; Brookfield, 1987).

Implications for Future Research

Since concepts like adult learning and self-evaluation for professional growth are gaining a permanent place in public education, it is important that the concepts they represent facilitate a maturing mindset within educators. It is important, therefore, that we develop valid assessments of these concepts. The instrument used in this study requires further investigation and construct validity, predicative validity and concurrent validity should be established.

The sample used in this study was experimentally accessible. Future research should make an effort to use a sample that is distributed randomly with stratified facets to make generalizations about the population. There was also a high percentage of non-respondents in this investigation. Efforts should be made to include a component in future

studies that will systematically follow up the non-respondents to find out their reasons for non-involvement.

Future investigations should also include a component that will provide for open ended questions in the survey as well as an interview process to examine the way that teachers frame their experiences. The terms used in the sub-scale (e.g., mandated curriculum, socially accepted conventions) are broad and may have different meanings for different teachers. Future investigation should look at the semantic differences very closely and try to narrow the ambiguities that arise as a result of these terms. Qualitative data and a variety of quantitative techniques would enrich the research in this area.

Even though the researcher is aware of the issues and complexity of qualitative research, there seems to be a need to have a qualitative component rooted in phenomenological research tradition to provide a deeper insight into the minds and perceptions of teachers. This sort of an approach may not be feasible in terms of the fast moving pace in schools but would add to the meaning of the teacher as a transformed adult learner.

Summary of the Study

This study began in an attempt to discover the perceptions teachers had about themselves in terms of being adult learners and agents of their own personal and professional lives.

Chapter One outlined the background and nature of the problem and provided a rationale for further investigation. Chapter Two presented a review of literature in two segments so that the background literature on reflection and adult learning could be tied in with the issues in teaching practice that militate against teachers in learner roles. Chapter Three described the methodology used in the study in terms of its research design, instrumentation, pilot study, sample, data collection, and analysis. A quantitative descriptive design was used. The instrument was developed by the researcher in an attempt to operationalize Mezirow's theory of Perspective Transformation (1978, 1981, 1989, 1990). Chapter Four presented the findings of the statistical analyses. Descriptive statistics in terms of frequencies, means, standard deviations, reliability analysis, Pearson 'r' correlations were used to establish internal consistency. Cross tabulations were used to describe differences in responses across demographic data. The final chapter discussed the findings and implications they had for teachers and administrators; it also discussed the practical implications and implications for future research.

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Appendix A - Sample letter to Principal

Dear

I am in the process of investigating a research problem in educational practice for my Graduate Studies (Brock University) an have obtained permission from Mr J. Hansen to conduct a survey in the elementary schools of our Board.

As you know, the success of a survey is dependent on the high rate of returns and in order to achieve this I need your assistance.

I have enclosed an envelope with a survey questionnaire to be distributed to each staff member of your school; the code number used is for record keeping purposes and will be deleted once the follow up process is completed. The survey should only take 10 minutes of a teacher's time.

I am counting on you to use your persuasive skills to encourage each teacher to complete the questionnaire. Just a few words from you will make a great difference! Although each questionnaire has a return envelope .. it would expedite matters if a staff member volunteered to collect all the questionnaires and send it to me via the Board Internal Mail by June 20 1990.

Thank you for your assistance in this matter. I appreciate you taking the time from your busy schedule to do so. I can be contacted at 525-2930 ext 195 if you have any further questions on this matter.

Eternally in your debt!

Yours truly,

Carolann Fernandes
Student Services . . . . . .
Residence (416) . . . . . .

Appendix B - Sample letter to Participant

Dear Fellow teacher,

I am in the M. Ed at Brock University, St. Catherines and am doing a study on 'the teacher as a professional. Your views on this topic are of particular interest to me. This investigation will be conducted in the Hamilton - Wentworth Roman Catholic Elementary Schools and permission from the Superintendent of Operations J. Hansen, has already been obtained.

You and I share a common interest and concern for the problem under investigation and I am relying on your cooperation and candidness in filling out the enclosed questionnaire. It should not take you more than 10 minutes of your time.

There are two parts to this questionnaire. The first part aims at providing me with information about you as a professional, and the second part will provide me with your perceptions of yourself as a teacher/learner.

You are not required to sign the questionnaire so as to maintain anonymity, however the code used at the end of the survey is for record keeping purposes only. It will be destroyed once all the questionnaires are returned.

Please answer all the questions and contact me if you have difficulty with any of them. I would appreciate if you will return the questionnaire in the enclosed envelope through the board mail. by June 20 1990.

A summary of this study can be obtained, however I will need your name and address to mail it to you.

Once again, let me tell you how much I appreciate your support and cooperation and look forward to receiving your reply by June 20 1990.

Your fellow colleague,

Carolann Fernandes
Student Services
Residence (416)

Appendix C - Sample Survey - Part 1
THE TEACHER AS A PROFESSIONAL

PART I - THE TEACHER AS A PROFESSIONAL

Background Information

Please do not write your name on the questionnaire. All information obtained through this questionnaire is confidential and will be treated as thus.

1. Gender: __ Male __ Female

2. Age: __ under 25 __ 25 - 30 __ 31 - 40
__ 41 - 50 __ 51 - 60 __ over 60

3. Pease check the level of formal education you have obtained.

__ no degree __ Bachelor's degree (B.A. B.Ed).
__ Master's degree __ Doctorate

4. (a) Do you hold a any additional qualifications: __ Yes __ No
(b) If Yes, state how many:

___ 1-3 ___4-6 ___ 7 or more

5. What additional courses have you taken in the last 2 years. Please specify the NUMBER of courses under the appropriate area:

__ Academic (e.g. Computer applications, nursing, etc.)
__ Interest (e.g. sailing, piano lessons, etc.)
__ Other (e.g. dog obedience, etc.)

6. How many committees are you involved in?

__ In School __ School Board __ Church __ Political
__ Ad hoc groups __ Neighborhood __ Other

7. What is your present position of responsibility?

Teacher:
__ Classroom __ Itinerant
__ Special Ed resource __ Guidance
__ Assessment Remediation __ Librarian
__ Other

8: What grade level(s) do you presently teach? Check a level where you spend the greater amount of your teaching time.

__ Pre Primary __ Primary (1 - 3) __ Junior (4 - 6)
__ Intermediate (7 - 8) __ Senior (9 - 13)

9. In total, how many years (completed) have you worked as a teacher?

__ 1 - 5 __ 6 - 10 __ 11 - 20 __ 21 - 30 __ over 30

10. How many years (completed) have you been in your present position?

__ 1 - 5 __ 6 - 10 __ 11 - 20 __ 21 - 30 __ over 30

11. What can your school be described as in language only?

__ English __ French __ French Immersion
__ Ukrainian __ Other __ Not applicable

12. Is your school an inner city school? __ Yes __ No

13. What is the approximate size of the school in which you presently work?

__ less than 250 __ 250 - 500 __ 501 - 750 __ over 750

14. What is the approximate number of students in the class you teach?

__ 1 __ 2 - 15 __ 16 - 25 __ 26 - 35 __ over 35

15. What is the approximate number of extracurricular school activities you are involved in?

__ none __ less than 2 __ 3 - 5 __ more than 5

Appendix D - Sample Survey - Part 2
THE TEACHER AS A PROFESSIONAL

PART II - THE TEACHER AS A PROFESSIONAL

The purpose of this survey is to establish an indicator of the way you perceive yourself as a professional. The list of statements provided may or may not reflect the way you describe yourself as teacher / learner. Please complete all questions and indicate the degree to which you agree or disagree with each statement. There are no right or wrong answers.

1 ------- 2 -------- 3 ------- 4
Strongly Agree Disagree Strongly
Agree Disagree

1. __ I prefer to take initiatives in my own learning.
2. __ I gain new insights when I reflect on old experiences.
3. __ I analyze the process I use for planning and organizing.
4. __ I increase my awareness about areas for improvement once I reflect on them.
5. __ I set the direction for my learning goals.
6. __ It is important for me to analyze why I make the assumptions I make.
7. __ I question the way I access other peoples' expertise.
8. __ Questioning basic assumptions increases my desire to be more vocal about inequalities.
9. __ I find alternate innovative instructional approaches after I do some soul searching.
10. __ For me experience is a process of learning.
11. __ My confidence is enhanced through self analysis.
12. __ I challenge the process I use for problem solving.
13. __ Self analysis leads to identification of positive and negative feelings about myself.
14. __ I find that I challenge the process of accountability.
15. __ It is important for me to look below the surface of things.
16. __ Learning is enhanced when I participate in the process.
17. __ I question some of the attitudes I assume.
18. __ In general, I often reanalyze the stand I take about issues.
19. __ I set my own pace in learning situations.
20. __ A team approach in learning situations facilitates learning for me.
21. __ I often question the biases I have about issues.
22. __ It is important for me to review my plans and strategies for inservice.
23. __ I prefer someone to direct me in learning situations.
24. __ I find I challenge socially accepted conventions.
25. __ Regular feedback enhances learning in most situations.
26. __ I prefer to be an independent learner.
27. __ I find I often analyze the reason for my uncertainties.
28. __ I derive a great deal of joy from learning.
29. __ Self analyses leads me to alternate ways for self evaluation.
30. __ Learning situations help me explore different ways of doing old things.
31. __ It is important for me to re-examine my motives for doing things.
32. __ I often challenge the purpose of mandated curriculum.
33 __ The more I reflect, the greater awareness I have of the power struggles that exist in the profession.
34. __ I usually seek to gain control of my teaching goals.
35. __ I reassess the process I use to interact with my colleagues.
36. __ I discover options for personal development as a result of self evaluation.
37. __ I usually take initiative in formulating my learning activities.
38. __ Analyzing what is of primary importance in my life is something I usually do.
39. __ I try to be particularly conscious of the forces that attemot to control me.
40. __ I find that I take more professional risks after self analysis.
41. __ I often find that I analyze the uniqueness of my ideas.